

# Making Rates

## How Do They Do That Actuarial Thing?

### Montana Labor-Management Advisory Council

Mike Taylor  
NCCI

# WC Ratemaking 101

- **What you won't hear**
- **Where to start**
- **Where does it come from**
- **What to do with it**
- **How can we be sure**
- **Bottom line to Joe Q. Public**

# Technical Actuarial Type Words

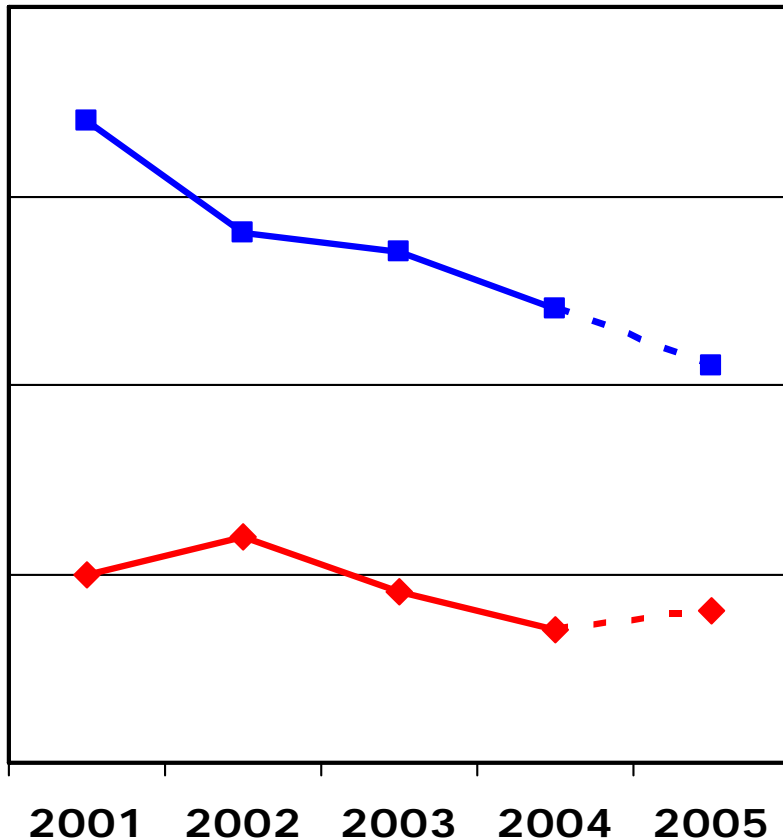
- Tail Factors
- Incurred But Not Reported
- On-Level Factor
- Exponential Trend Factors
- 18<sup>th</sup> to Ultimate Development
- Composite Adjustment Factor
- Off-Balance

# Where to start?



- Look at where the state is
- Gather new and updated data
- Objectively analyze it
- Mix in other factors
- Spread it out

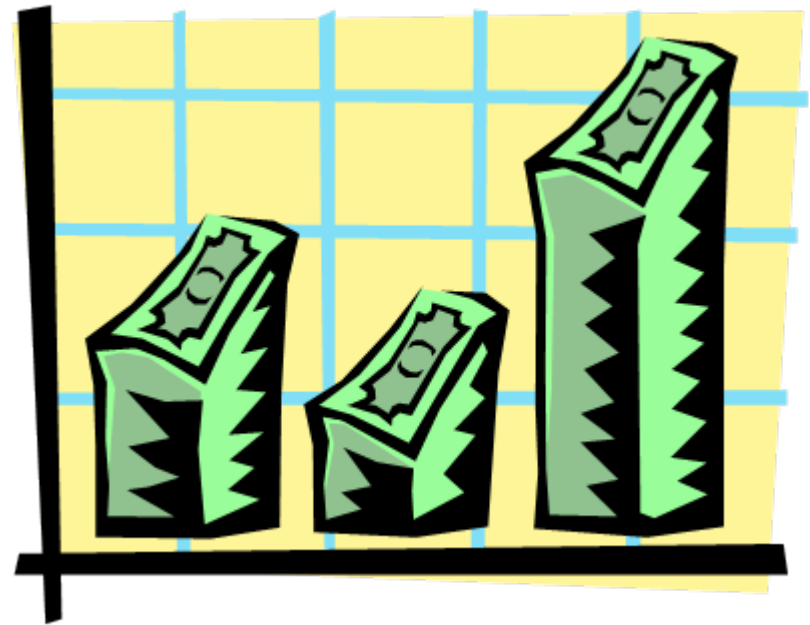
# Where are we?



- What's the current status?
- Any recent:
  - System changes?
  - Benefit Changes?
  - Law Changes?
  - Other Stuff?

# 1<sup>ST</sup> Step: Determine Overall Rate Level

- How much premium is needed to fund the system to only pay the anticipated indemnity and medical losses?



# Data...

- **Financial Data**
  - Calendar Year Data
  - Policy Year Data

**Answers the 1st question:**

**“How much was collected?”**



# ...and more Data



- **Loss Data**

**Answers the 2nd question:**

**“How much did the industry pay out?”**

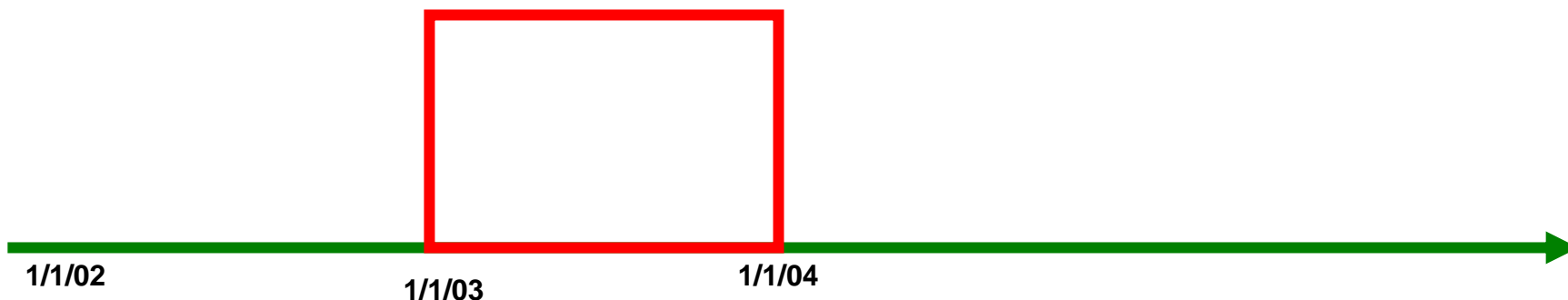
- **Type of injuries**
- **Medical costs**
- **Wage Replacement**
- **Frequency**
- **Severity**

# Different Data For Different Needs



- Calendar Year Data
- Policy Year Data
- Individual Policy Data

# Calendar Year 2003



**Consists of all transactions reported in 2003, regardless of the years which generated them.**

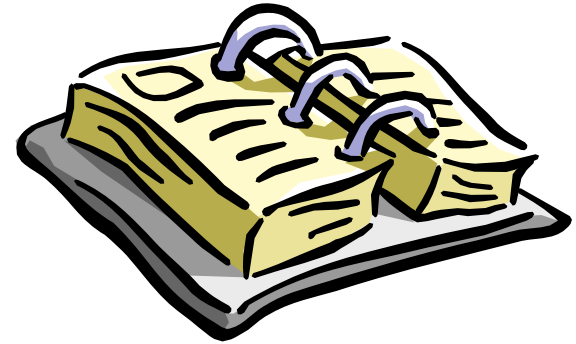
**Premium in – losses paid out**

**Sources: NAIC, Annual Statements or AM Best**

# Calendar Year Data

## Advantages:

- Readily available
- Fresher
- Compiled quickly
- Fixed over time
- Easily reconciled to other sources



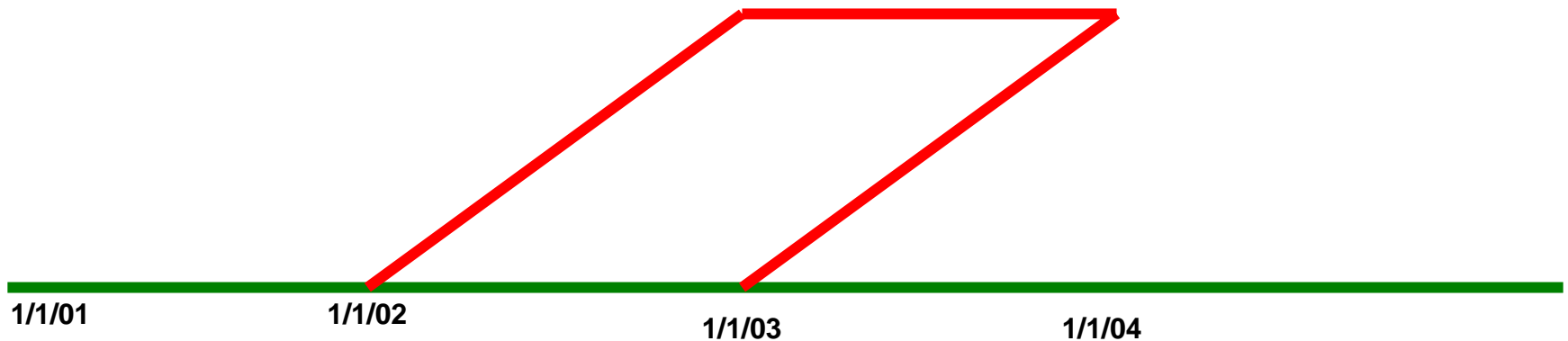
# Calendar Year Data



## Drawbacks

- Distorted by rapid growth or decline in market share
- Greatly impacted by prior years reserve changes in current year
- Not a good measure of profitability

# Policy Year 2002



**Data is organized by matching premiums and losses to policies issued during a given year, regardless of when it's reported to insurer**

# Policy Year Data

## Advantages

- Matches losses & premiums to the underlying policies
- More Mature
- More stable



# Policy Year Data



## Drawbacks

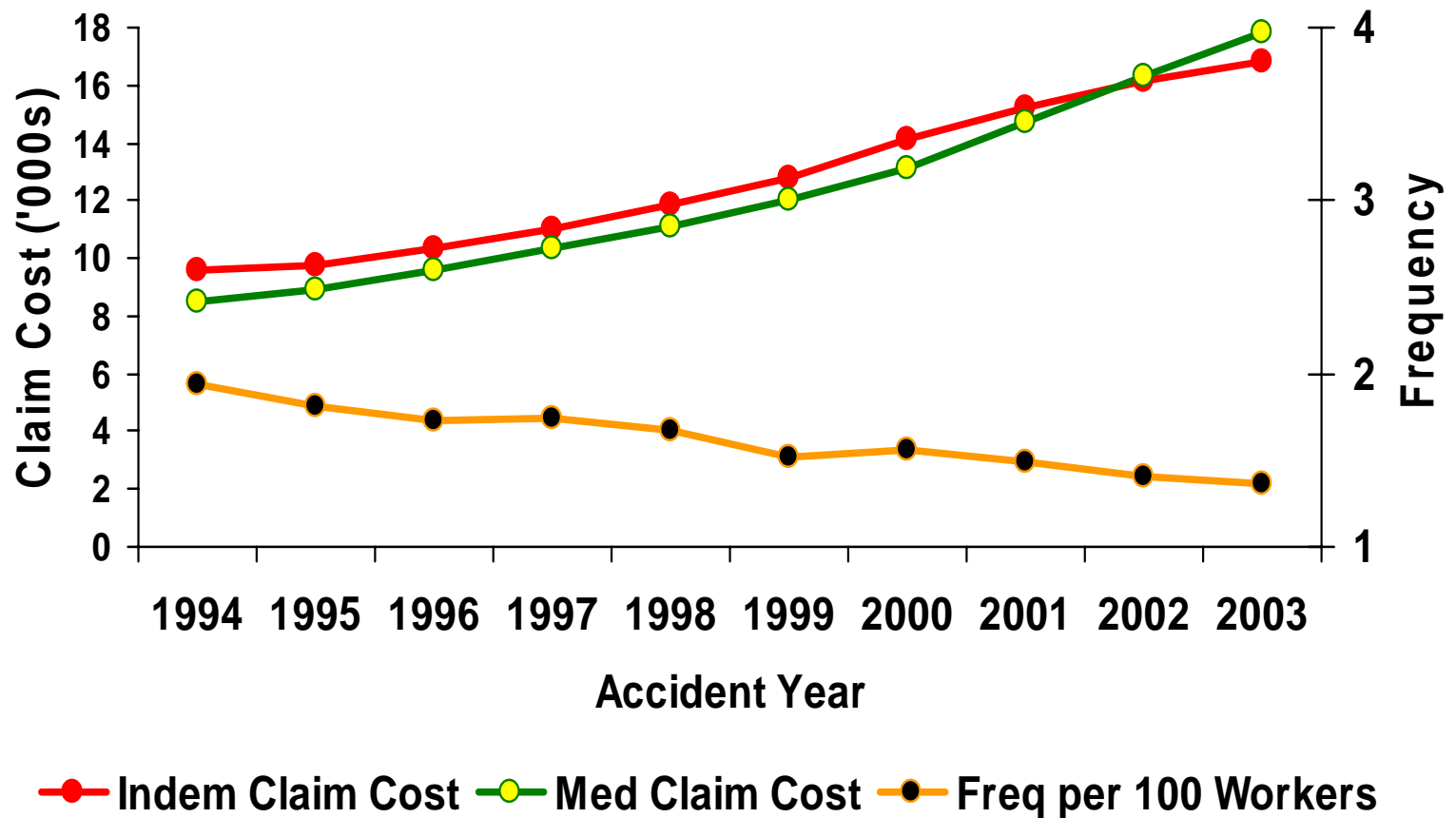
- Older
- Takes too long to finalize
- Not readily published

## 2<sup>nd</sup> Step: Trend

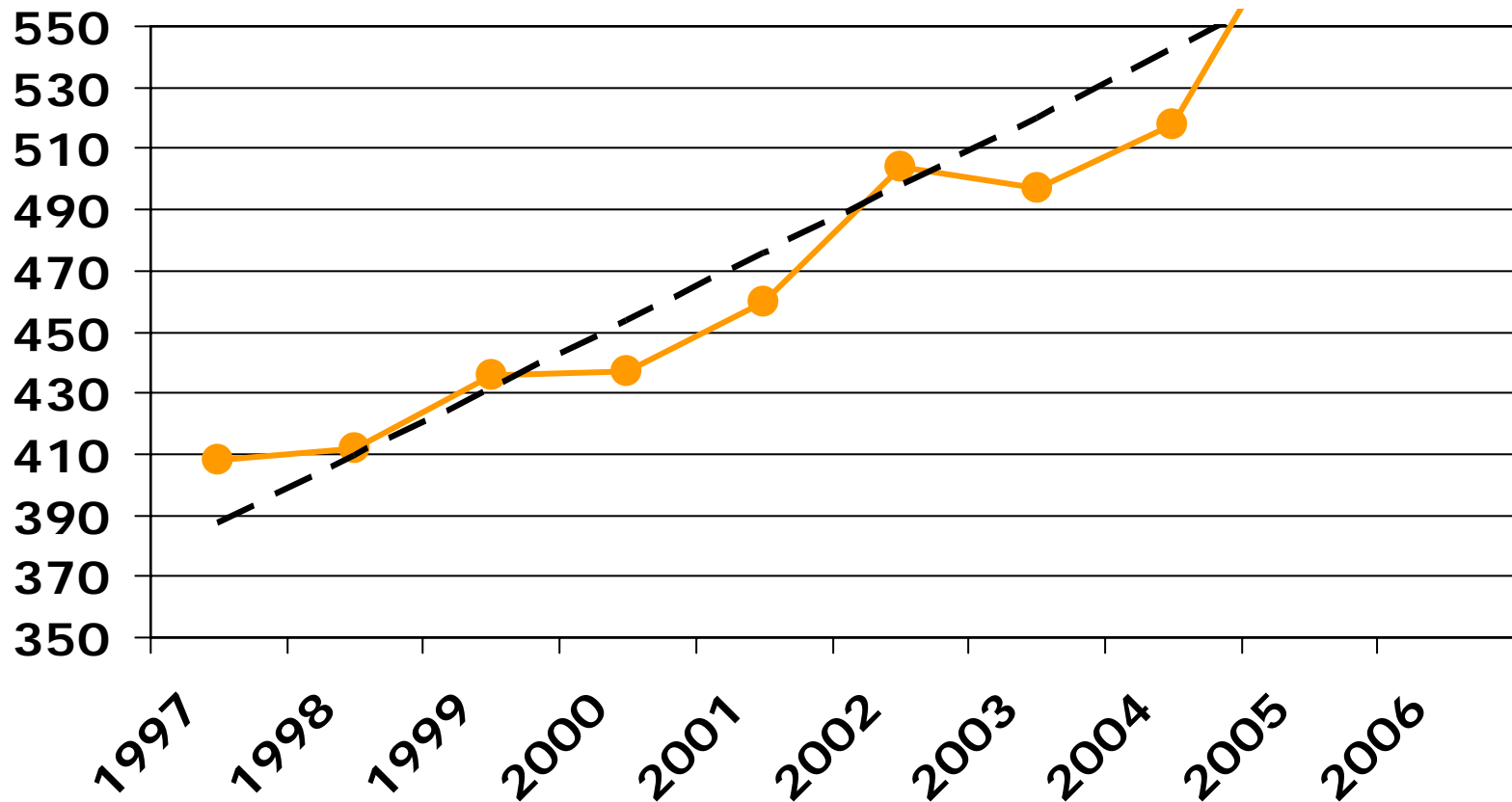
- Getting from Point **A**
  - (Where we are)
- to Point **B**
  - (Where we need to go)
- Measure the changes in the growth/decline of wages and losses

Differences indicate trend

# Cost Per Claim Going Up, Number of Claims Going Down



# Wages Are Expected To Grow



Montana Average Weekly Wage & Trend -  
Source: US BLS

# Negative Trend



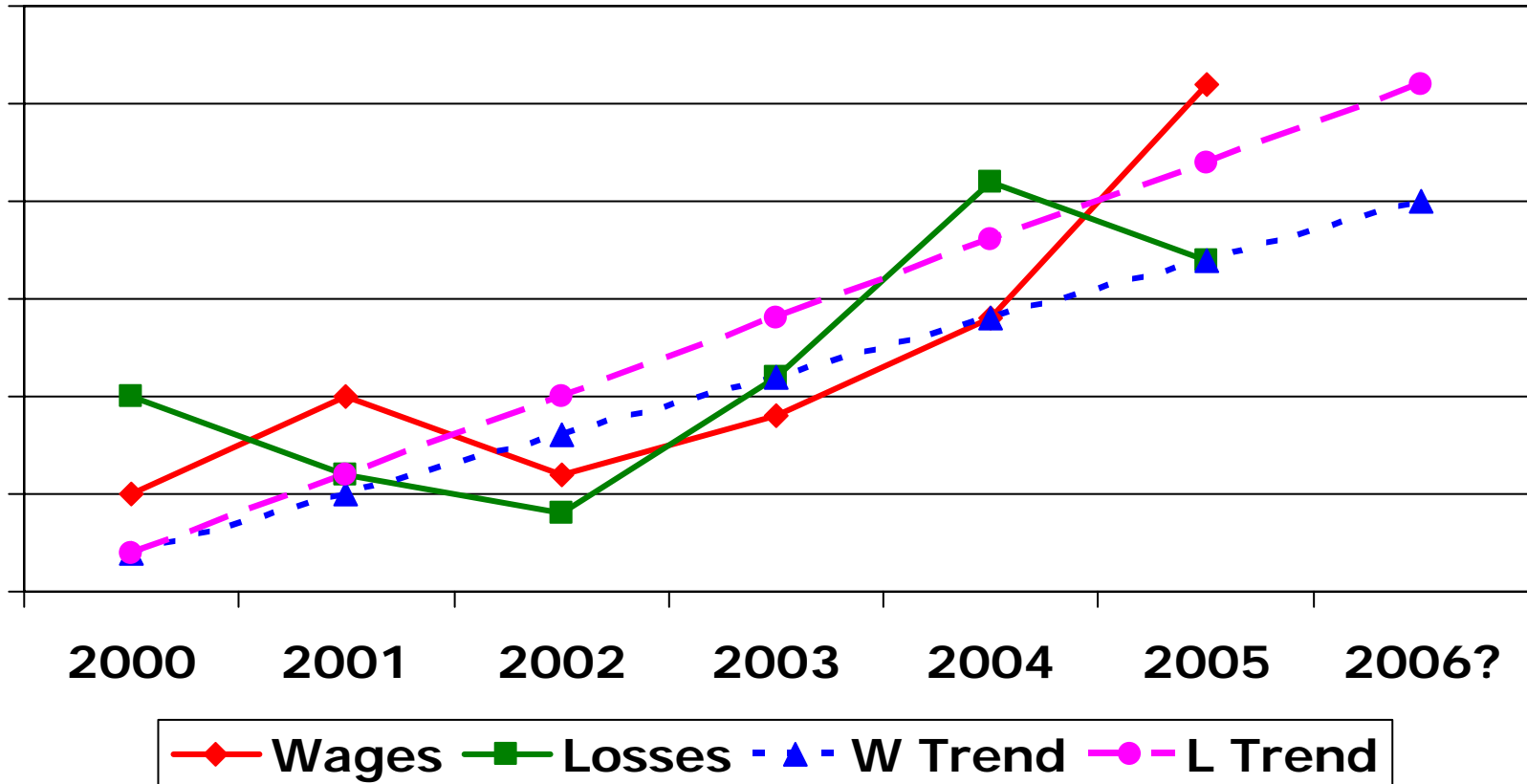
# Positive Trend



# Flat Trend



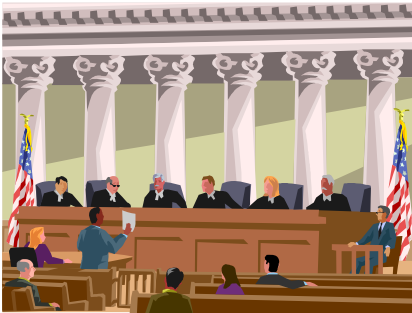
# Real World



# 3<sup>rd</sup> Step: Analyze & Include Any Changes



- Legislation  
Benefit Increases



- Court Decisions  
Compensability



- Regulations  
Safety Rules

# Impact of changes

- **Benefit Changes** – Immediate impact on premiums by instituting higher or lower wage loss payments
- **Court Decisions** – Alter laws on compensability, coverages or benefits. Impact can be retroactive, immediate or in future
- **Regulations** – Generally more long term in nature (safety requirements) but can have immediate effect (assessments)

# If we continue at the same level...

- Will things balance out?
- Will there be enough money to pay claims?
- Will there be more than needed?



# 4<sup>th</sup> Step: Sanity Check



**Check outside sources  
for independent  
verification:**

- DOL
- WCD
- OSHA
- BLS
- Carriers
- Guy on the street

# 5<sup>th</sup> Step: Determine Overall Premium Level

Add everything up to determine what the overall premium level needs to do:

- Up?
- Down?
- No change?

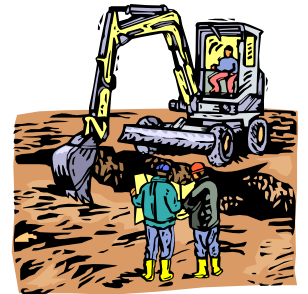


# 6<sup>th</sup> Step:

## Spread Out The Changes

**Not equitable to apply rate change unilaterally to all employers**

- Distribute to 5 Industry groups based on their experience**
- Distribute to individual classifications based on their experience**



# Final Manual Rate

## Full Rate

- A provision for each expense item is added by the insurer to the final loss cost to produce a full manual rate
- Carrier rates expressed as a Loss Cost Multiplier

**Loss cost X LCM = Final Rate**

<b>Profit &amp; Contingencies</b>
<b>Taxes, Licen &amp; Fees</b>
<b>Production &amp; General Expense</b>
<b>Loss Adjustment Expense</b>
<b>Developed and Trended Losses</b>

# Final Premium Impact



- What does this mean to the average employer?
- Are there other factors involved?
  - Growth
  - Change in exposure
  - Losses
- Bottom Line:  
"How much will this cost me?"

# Policyholder Pricing Programs

Programs "tailor" the final premium to better match the characteristics of each insured

- Experience rating
- Contractors Premium Credit Program
- Schedule Rating
- Premium discounts by size of policy
- Retrospective Rating
- Etc.

# Dirt Diggers, Inc

- **Dirt Diggers, Inc Payroll:**

- **6217                \$100,473**
- **8810                \$ 25,716**

- **Loss Cost Rates:**

- **6217 =            \$23.67**
- **8810 =            \$ .68**

- **Mega Mutual Insurance Company**
- **Loss Cost Multiplier = 1.25**

- **MMIC Rates:**

- **Class 6217 = \$29.59 /\$100**
- **Class 8810 = \$0.85/\$100**

-

# Dirt Diggers, Inc

6217	\$100,473	x	\$29.59/\$100	=	\$29,729
8810	\$25,716	x	\$ .85/\$100	=	\$ 218

Manual Premium	=	\$29,947
Experience Mod	x	.95
Modified Premium	=	\$28449
MCCPAP		.95
Standard Premium		\$27,026
Premium Discount	(12%) x	.88

Estimated Annual Premium	\$23,728
--------------------------	----------

Base Premium = \$29,947	Actual Premium = \$23,728
-------------------------	---------------------------

DIFFERENCE = <\$6,219>	@ 21% Discount
------------------------	----------------

# Fall In A Hole, Inc.

- **Fall in a Hole, Inc Payroll**
- **6217                \$100,473**
- **8810                \$ 25,716**
- **6217 =             \$23.67**
- **8810 =             \$ .68**
- **Fairly Equitable Insurance Company**
- **Loss Cost Multiplier = 1.50**
- **FEIC Rates:**
- **Class 6217 = \$35.51/\$100**
- **Class 8810 = \$ 1.02/\$100**
-

# Fall In A Hole, Inc.

$$\begin{array}{rcl} 6217 & \$100,473 & \times \$35.51/\$100 = \\ 8810 & \$25,716 & \times \$1.02./\$100 = \end{array} \quad \begin{array}{r} \$35,678 \\ \$262 \end{array}$$

Manual Premium = \$35,940

Experience Mod x 1.25

Modified Premium = \$44,925

MCCPAP  
Standard Premium = \$42,679

Premium Discount (8%) x .92

Estimated Annual Premium \$39,265

Base Premium = \$35,390

Actual Premium = \$39,265

DIFFERENCE = \$3,875

@ 10% Increase

# Differences

- **Dirt Diggers, Inc**
  - Safety conscientious
  - controlled losses
  - better training

Provides more carrier choices, options for premium savings via lower ex-mod MCCPAP, etc.

**\$23,728**

**vs**

- **Fall in a Hole, Inc**
  - Multiple losses
  - less emphasis on safety
  - spotty training

Results in less options for coverage, higher ex mod, lower premium discount, etc.

**\$39,265**

**\$15,537**

**or**

**165% higher**

# Questions?

# Comments?

# Contact:

## Contact:

**Mike Taylor**  
**State Relations**  
**NCCI**  
**10300 SW Greenburg Road**  
**Suite 550**  
**Portland, OR 97223**

[Mike\\_taylor@ncci.com](mailto:Mike_taylor@ncci.com)

**503-892-1858 - office**

**503-789-2328 - mobile**